



Missouri Department of Natural Resources

PUBLIC NOTICE

APPLICATION FOR MISSOURI STATE OPERATING PERMIT

DATE: August 11, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources (MDNR), as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed effluent limitations and/or determinations are invited to submit them in writing to the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552, ATTN: G. Irene Crawford, Regional Director. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by September 11, 2006, or received in our office by 5:00 p.m. on September 14, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

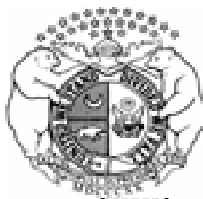
Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at DNR's website, <http://www.dnr.mo.gov/env/wpp/index.html>, or at the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, Missouri 63552.

Public Notice Date: August 11, 2006
Permit Number: MO-0133019
Northeast Regional Office

FACILITY NAME AND ADDRESS	NAME AND ADDRESS OF OWNER
Hickory Homestead WWTF 2085 State Route F Fulton, MO 65251	Marty Baumgartner 2085 State Route F Fulton, MO 65251
RECEIVING STREAM & LEGAL DESCRIPTION	TYPE OF DISCHARGE
Unnamed tributary to Owl Creek (U) Owl Creek (C) (00741) Sec. 36, T48N, R11W, Callaway County	Domestic, new

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.

MO-0133019

Owner:

Marty Baumgartner

Address:

2085 State Route F, Fulton, MO 65251

Continuing Authority:

Same as above

Address:

Same as above

Facility Name:

Hickory Homestead WWTF

Facility Address:

2085 State Route F, Fulton, MO 65251

Legal Description:

SE ¼, NW ¼, Sec. 36, T48N, R11W, Callaway County

Latitude/Longitude:

+3853445/-9206342

Receiving Stream:

Unnamed tributary to Owl Creek (U)

First Classified Stream and ID:

Owl Creek (C) (00741)

USGS Basin & Sub-watershed No.:

(10300102-190002)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – Rental Housing – SIC #4952

No-discharge System

Septic tanks/single-cell, no-discharge storage lagoon/wastewater irrigation/sludge is retained in lagoon.

Design population equivalent is 29.

Design flow is 3,484 gallons per day (1-in-10 year design including net rainfall minus evaporation).

Average design flow is 2,175 gallons per day (dry weather flows).

Design sludge production is 0.4 dry tons per year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

A handwritten signature in black ink, reading "Doyle Childers".

Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Expiration Date
MO 780-0041 (10-93)

G. Irene Crawford, Director, Northeast Regional Office

FACILITY DESCRIPTION (continued)

Outfall #001 – Domestic Wastewater

Receiving Stream Watershed: a gaining stream setting

<u>Design Basis:</u>	<u>Avg Annual</u>
Design dry weather flows	2,175 gpd
Design with 1-in-10 year flows	3,484 gpd
Design P.E.: 29	

Storm Water Flows: (Callaway County)

Average Annual Rainfall:	40 inches
1-in-10 Year Annual Rainfall:	52.0 inches
25-year-24-hour Storm:	5.5 inches

1-in-10 year Flows:

	<u>Annual</u>	<u>Percent Reduction Factors for 90 days</u>
Runoff Concrete and Roof Areas	0 feet	0
Runoff Earthen Areas (lagoon berm, etc.)	2.2 feet	40%
Rainfall minus Evaporation (R-E) on lagoon water surface	1.6 feet	60%

<u>Lagoon Dimensions:</u>	<u>Surface Area</u>	<u>Depth from Bottom</u>	<u>Pump down depth</u> (from spillway)
Center Line Top Berm:	16,614 sq. ft.	8 feet depth	
Inside Top Berm:	15,594 sq. ft.	8 feet depth	
Emergency Spillway:	14,124 sq. ft.	7 feet depth	
Freeboard (top berm to spillway):		1 foot depth	
Maximum operating level:		6 feet depth	1 foot
Minimum operating level:		2 feet depth	5 feet
Aerobic BOD design basis:		3 feet depth	
Storage volume (minimum to maximum water levels):		305,026 gallons	
Berm top width: 4 feet			
Berm runoff area (Centerline to emergency spillway):	2,490 sq. ft.		
1-in-10 year, 90-day storm water flows into lagoon (R-E):	117,820 gallons		

Storage Capacity **Avg Annual (Days of Storage)**

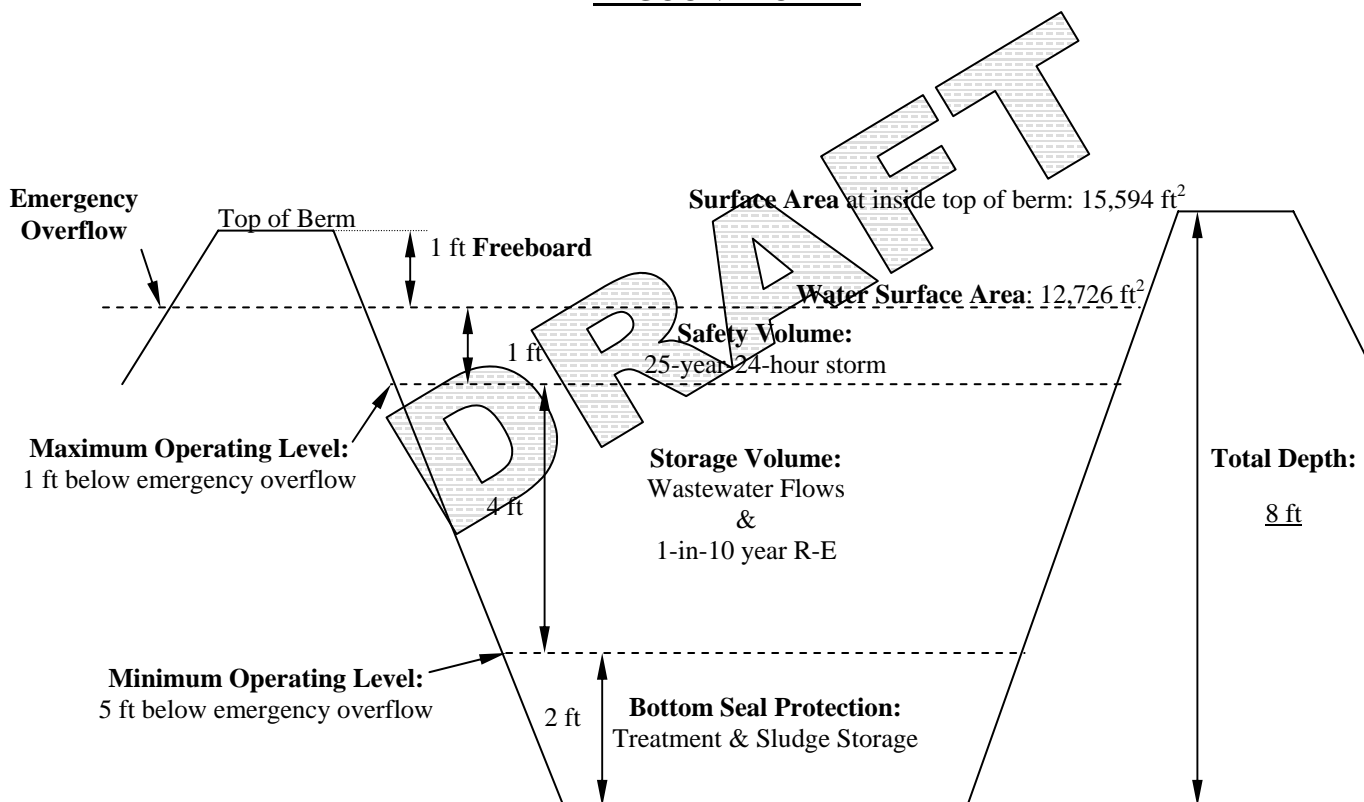
Design for Dry weather Flows:	140 days
Design with 1-in 10 year flows:	88 days

Land Application to fescue grassland: NW ¼, SE ¼, Sec. 36, T48N, R11W, Callaway County

Irrigation Volume/year:	1,003,900 gallons (including 1-in-10 year flows)
Irrigation areas:	1.5 acres at design loading (5 acres total available)
Application rates/acre:	0.2 inch/hour; 3 inches/week; 24 inches/year
Field slopes:	4-8 percent
Equipment type:	movable pump and movable, four-inch, perforated pipe
Vegetation:	fescue grass land
Application rate is based on: hydraulic loading rate	

Additional Comments:

LAGOON PROFILE



A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 4 of 7	
					PERMIT NUMBER MO-0133019	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> – Emergency discharge from lagoon or irrigation sites (Note 1)						
Flow	MGD	*		*	Once/day**	24hr. estimate
Biochemical Oxygen Demand ₅	mg/L		45		Once/month**	grab
Total Suspended Solids	mg/L		45		Once/month**	grab
pH – Units	SU	***		***	Once/month**	grab
Fecal Coliform	#/100ml	*		*	Once/month**	grab
Ammonia Nitrogen as N	mg/L	*		*	Once/month**	grab
Temperature	°C	*		*	Once/month**	grab
<u>Land Application Operational Monitoring</u> (Notes 2 and 3)						
Lagoon Freeboard	feet	*			Once/month	measured
Irrigation Period	hours	*			Daily	total
Volume Irrigated	gallons	*			Daily	total
Application Area	acres	*			Daily	total
Application Rate	inches/acre	*			Daily	total
Rainfall	inches	*			Daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE _____.						
<u>Irrigated Wastewater</u> (Notes 4 and 5)						
Biochemical Oxygen Demand ₅	mg/L	*			Once/year	grab
Total Suspended Solids	mg/L	*			Once/year	grab
pH – Units	SU	*			Once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
 ** Monitor only when discharge occurs. Report as no-discharge when a discharge does not occur during the report period.
 *** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH standard units.

Note 1 – **No-discharge facility requirements.** Wastewater shall be stored and land applied during suitable conditions so that there is no-discharge from the lagoon or irrigation site. An emergency discharge may occur when excess wastewater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10-year, 365-day rainfall or the 25-year, 24-hour storm event.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 2 – Records shall be maintained and summarized into an annual operating report that shall be submitted by January 28th of each year for the previous calendar year period. The report shall include the following:

- (a) record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- (b) the number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
- (c) a summary of the irrigation operations including freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility and summary of testing results.

Note 3 – Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level. See Special Conditions for Wastewater Irrigation System requirements.

Note 4 – Wastewater that is irrigated shall be sampled at the irrigation pump or wet well.

Note 5 – Monitor in June of each year.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:

- (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
- (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
- (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

5. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

6. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
- (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, Permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids from the lagoon. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

8. Wastewater Irrigation System

- (a) Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.
- (b) Irrigation Design. Design and operation shall be in accordance with 10 CSR 20-8.020(15). Permittee shall operate the land application system in accordance with the design parameters listed in the Facility Description section of this permit:
- (1) No-Discharge System. When the Facility Description is "No-Discharge", wastewater must be stored and irrigated at appropriate times. There shall be no-discharge from the irrigation site or storage lagoon except due to precipitation exceeding either the 1-in-10 year rainfall event for the design storage period or the 25-year 24-hour rainfall event.
- (c) Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the overflow point except due to exceedances of the 1-in-10-year or 25-year, 24-hour storm events. Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage lagoon(s) shall be lowered to the minimum operating level prior to each winter by November 30.
- (d) Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.
- (e) General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. Wastewater shall be land applied only during daylight hours. The wastewater irrigation system shall be capable of irrigating the annual design flow during an application period of less than 100 days or 800 hours per year.
- (f) Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions. There shall be no irrigation on days when more than 0.2 inch of precipitation is received or when there is observation by operator of an imminent or impending rainfall event.

C. SPECIAL CONDITIONS (continued)

- (g) Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling; or 50 feet of the property line.
 - (h) Public Access Restrictions. Public access shall not be allowed to the irrigation site(s). Fencing and public access restrictions to land application sites shall be in accordance with requirements in 10 CSR 20-8.020(15)(B)(5).
 - (i) Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/4 hours; during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.
 - (j) Operation and Maintenance Manual. The permittee shall develop, maintain, and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to the departments' Water Pollution Control Program and Regional Office for review and approval. The O&M Manual shall be reviewed and updated at least every five years.
9. Lagoon and earthen basins shall have a liner that is designed, constructed and maintained in accordance with 10 CSR 20-8.020(13)(A) 4. Percolation losses shall not exceed 500 gallons per acre per day unless approved by the department under 10 CSR 20-8.020(13)(A) 4.D. If operating records indicate excessive percolation, the department may require a water balance test in accordance with 10 CSR 20-8.020(16).

Date of Fact Sheet: July 27, 2006

Date of Public Notice: August 11, 2006

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0133019

FACILITY NAME: Hickory Homestead WWTF

OWNER NAME: Marty Baumgartner

LOCATION: Sec. 36 T48N R11W County: Callaway

RECEIVING STREAM: Unnamed tributary to Owl Creek (U)

FACILITY CONTACT PERSON: Marty Baumgartner

TELEPHONE: (573) 642-3217

FACILITY DESCRIPTION

The development is a small subdivision of nine houses, each with septic tanks. The facility is a single-cell, no-discharge lagoon with six feet of water depth, receiving a design flow of 2,175 gallons per day (dry weather, domestic flow) and 3,484 gallons per day (total flow, including rainfall). The supernatant is pumped to an irrigation field. The sludge is retained in the lagoon.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Department of Natural Resources under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended).

10 CSR 20-7.031 Missouri Water Quality Standards, Missouri Department of Natural Resources (the Department) "defines the Clean Water Commission water quality objectives in terms of water uses to be maintained and the criteria to protect those uses." The receiving stream's beneficial water uses to be maintained are livestock and wildlife watering, protection of aquatic life, and whole body contact recreation category B.

To protect these beneficial uses and the water quality of the receiving stream, effluent limitations are being established under federal and state laws.

EFFLUENT LIMIT DERIVATION & RATIONALE

This system is designed as a no-discharge lagoon and irrigation system. A Water Quality Review Sheet was therefore not developed. Monitoring requirements have been set according to the procedure for conducting a reasonable potential analysis.

Please note, this facility is discharging within two (2) miles of a stream classified as whole body contact recreation. Monitoring for fecal coliform is therefore added for emergency discharges pursuant to Missouri Code of State Regulations 10 CSR 20-7.015(8)(B)4.

This permit will be issued for a period of five (5) years.